

**PROCEDURE FOR VERIFICATION OF THE
AUTOCLAVE
ASTM C 151**

A. PURPOSE

The purpose of this procedure is to verify that the autoclave heats to the desired temperature within the allowable time and that it operates within the specifications of ASTM C 151. This verification is made annually (see note). ASTM requires a calibration every 30 months.

B. APPARATUS REQUIRED

1. Calibrated thermometer reading within the specified range.
2. Certified stop watch.

C. PROCEDURE

1. Place the thermometer into the port on top of the autoclave.
2. Verify that the autoclave is ready for operation, load specimen.
3. Turn on the autoclave and start the stop watch at the same time.
4. Observe the time it takes for the autoclave to reach a pressure of 295 psi with a corresponding temperature of 417 - 423 °F (214 - 218 °C). Record the time, pressure, and temperature. The time should be between 45 - 75 minutes.
5. Turn off the autoclave and restart the stop watch to verify the pressure drop to 10 psi in 1.5 hours.
6. Record the time required.

D. TOLERANCE

All tolerances are as recorded in ASTM C 151, Section 4.5.

Note: CCRL inspection shall be the calibration of record.

EQUIPMENT VERIFICATION RECORD

Verified By: _____	Date: _____
Equipment: <u>Autoclave</u>	Location (Lab): _____
Identification No.: _____	Verification Frequency: <u>12 months</u>
Previous Verification Date: _____	Next Due Date: _____
Verification Equipment Used: Certified thermometer, SN: _____ Certified stop watch, SN: _____	
Verification Procedure: <u>(In-house) OMR_CVP-48 / ASTM C 151</u>	

Record Time and Pressure

Time in Minutes	Pressure	Temperature
START + 15 min.		
START + 30 min.		
START + 45 min.		
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If Autoclave meets the requirement of obtaining 295 psi within 45 – 75 minutes, determine that it will maintain 285 – 305 psi (1.03 – 2.07 MPa) for at least 3 hours. Record time, pressure and temperature below. Temperature required 417 – 423 °F (214 – 216 °C). Observe the Autoclave at 15 – 20 minute intervals.

Beginning Time:		Ending Time
Time Observed	Pressure	Temperature

If the Autoclave meets the 3 hour requirement, reset stop watch. Turn power to Autoclave off and start watch at same time. Record time and pressure. After 1.5 hours; record time and pressure. Required: Less than 10 psi after 1.5 hours.